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ADDRESS

Chemical Department, Maryland Agricultural College,

COLLEGE PARK, MD.

ANALYSIS OF

Commercial Feeding Stuffs Sold in Maryland

BY THE CHEMICAL DEPARTMENT OF

THE MARYLAND AGRICULTURAL COLLEGE.

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The table commencing on page 4 contains the results of analyses of feeding stuffs made in this laboratory since the publication of Quarterly No. 28. The examinations have been, for the most part, limited to samples of "concentrated commercial feeding stuff."

The analyses are arranged in the order of protein content, with a few exceptions in order to bring together feeds of the same class or brand. The analyses are stated as percentages, or pounds per hundred.

Cotton seed meal, for feeding, should be of a light canary color, with sweet, nutty odor. The presence of hulls makes it dark in color and adds lint. The best meal is nearly free from lint or short cotton. Fermentation and heating, before or after the seed is crushed and pressed, renders the meal dark in color and of bad odor and flavor. Such meal is only fit to be used as fertilizer.

When added to dairy rations only two to four pounds of cotton seed meal should be used per cow each day, the latter amount only after the animals have become accustomed to it.

Oil meal, linseed meal or flaxseed meal, is made from flaxseed after crushing it and pressing out as much of the oil as possible. It still contains about 7 per cent. of oil. This is the "old process" meal, and is to be preferred to the "new process," where nearly all of this oil is removed by a suitable solvent, as benzine or carbon bisulfid.

However, sample No. 12995 is an unpressed oil meal that is being used for feeding purposes.

Oil meal, being somewhat less concentrated (containing less protein and fat) than cotton seed meal, may be used more freely.

Gluten meal is a by-product from the manufacture of starch and glucose from corn.

The various "oat feeds" are composed largely, and sometimes entirely, of oat bran and middlings, the by-product from the preparation of oat meal and "rolled oats" for human food.

Concentrated feeds will vary some in composition, but the quality will be indicated by the percentage of protein and fat. The following abbreviated list contains the principal concentrated foods, as well as some of the more common foods, for comparison. The percentage given are the approximate averages to the nearest unit. Any decided shortage below the figures here given denotes poor quality or adulteration.

Feed.	Protein. Per Cent.	Fat. Per Cent.
Cotton Seed Meal	41	8
Linseed, or Flaxseed Meal	33 35	*7 †2
Gluten Meal	33	2
Gluten Feed	25	3
Germ Oil Meal	23	10
Malt Sprouts	23	2
Dried Brewers' Grains	20	3
Wheat Middlings	16	4
Wheat Bran	15	4
Wheat	12	2
Oats	11½	4
Corn Meal	10	4
Cow Peas	21	1
Alfalfa Hay	14	2
Red Clover Hay	12	3
Timothy Hay	6	2½
Oat Straw	4	2
Cotton Seed Hulls	4	2
Wheat Straw	3	1
Corn Fodder (Stover)	3½	1

*Old process. †New process.

The law requires that all concentrated feeds be branded with name of manufacturer, name of feed and the guaranteed analyses of protein and fat. Purchasers should insist on the guarantee.

We have reason to believe that ground peanut hulls are being used to some extent to adulterate feeds, probably bran, and purchasers should be on the lookout for this, as the hulls are worthless as a feed.

This department will be glad to receive suggestions and correspond with consumers of feed and dealers in regard to suspected adulteration, and will make investigations of the same so far as we possibly can.

ANALYSES OF FEEDING STUFFS.

No.	Name of Manufacturer or Agent.	Name of Food Stuff.	Place of Sampling.	Protein.		Fat or Ether Extract.	
				Found.	Guaranteed.	Found.	Guaranteed.
12950	Baugh & Sons Co., Baltimore, Md.	Meat Meal for Poultry....	White Marsh.....	61.95	57.00	18.30	10.00
13001	Geo. L. Harding, Binghamton, N. Y.	Meat Meal	Hagerstown.....	41.94	.....	12.73	.....
13000	" " "	High Grade Beef Scrap...	Hagerstown.....	40.54	42.00	20.53	30.00
12962	F. W. Brode & Co., Memphis, Tenn.	"Owl Brand" Pure Cotton Seed Meal.	Sykesville.....	43.88	41.00	10.06	7.00
12967	J. T. & R. S. Wells, Memphis, Tenn.	"Star Brand" Cotton Seed Meal.	Westminster	43.39	43.00	9.03	9.00
12969	W. A, Kaiser, Memphis, Tenn.	"Eagle Brand" Cotton Seed Meal.	Baltimore.....	42.74	43.00	9.52	9.00
12992	The American Cotton Oil Co., New York, N. Y.	Prime Cotton Seed Meal..	Hagerstown.....	42.38	41.00	8.70	9.00
12952	Chapin & Co., St. Louis, Mo....	"Green Diamond Brand" Cotton Seed Meal.	Bel Air	42.21	43.00	9.77	9.00
13007	Havens Oil Co., Washington, N. C.	Cotton Seed Meal.....	Hyattsville.....	42.17	42.00	8.30	9.00
12976	W. G. Bishop & Co., Baltimore, Md.	Prime Cotton Seed Meal..	Baltimore	41.28	41.00	10.15	9.00
12968	Agent C. S. Schermerhorn & Son, Baltimore, Md.	Cotton Seed Meal	Ridgely	38.70	.....	8.07	.....
12961	American Linseed Co., New York, N. Y.	Old Process Oil Meal.....	Sykesville.....	34.11	32.00	6.32	5.00
12984	Agent Samuel J. Diggs & Son, Baltimore, Md.	Flax Seed Meal	Baltimore	33.96	.....	6.95	.....
12973	W. G. Bishop & Co., Baltimore, Md.	Old Process Linseed Meal.	Baltimore	32.91	35.00	7.20	5.00

12966	Metzgar Seed and Oil Co., Toledo, O.	Old Process Oil Meal	Westminster	30.75	30.00	7.08	5.00
12995	Albert Dickinson Co., Chicago, Ill.	"Globe Brand" Flax Seed Meal. (Unpressed).	Hagerstown	23.69	.....	37.28	.....
13012	Continental Cereal Co., Peoria, Ill.	Continental Gluten Feed	Bel Air	27.57	35.00	16.65	12.00
12997	The Glucose Sugar Refining Co., Chicago, Ill.	Buffalo Gluten Feed	College Park	25.10	28.00	3.04	3.00
12986	Michigan Starch Co., New York, N. Y.	Michigan Gluten Feed	Baltimore	19.78	27.00	6.78	4.00
13010	Western Grain Products Co., Milwaukee, Wis.	Hammonds Dairy Feed	Hyattsville	19.35	17.00	4.75	3.00
12963	The H.-O. Co., Buffalo, N. Y.	H.-O. Dairy Feed	Frederick	19.30	18.00	4.80	4.50
12993	American Milling Co., Owensboro, Ky.	Sucrene Dairy Feed	Hagerstown	16.01	16.50	4.25	3.50
13004	E. P. Mueller, Milwaukee, Wis.	Muellers Molasses Grains	Hagerstown	14.83	*	3.80	*
12949	American Cereal Co., Chicago, Ill.	Quaker Dairy Feed	Corbet	13.18	14.00	4.11	3.50
12971	Washburn & Crosby, Indianapolis, Ind.	Flour Middlings	Perryman	18.48	17.38	6.20	4.62
12948	C. A. Gambrill Manufacturing Co., Baltimore, Md.	White Middlings	Pocomoke	15.40	.....	3.22	.....
12981	Cyphers Incubator Co., Buffalo, N. Y.	Mealed Alfalfa	Baltimore	17.38	17.60	2.95	4.00
12982	" " "	Short Cut Alfalfa	Baltimore	16.76	17.60	3.18	4.00
12987	Purina Mills, St. Louis, Mo.	Purina Alfalfa Meal	Baltimore	13.86	.....	1.63	.....
12998	Geo. L. Harding, Binghamton, N. Y.	Alfalfa Meal	Hagerstown	12.37	.....	2.43	.....
12983	Dairy Feed Co., Cockeysville, Md.	Dried Distillers Grains	Baltimore	17.64	.....	11.64	.....
12945	" " "	Dried Distillers Grains	Cockeysville	16.15	18.00	12.20	10.00
12974	The Monticello Distilling Co., Baltimore, Md.	Dried Distillers Grains	Bel Air	16.23	.....	10.74	.....

*Guaranteed Protein and Fat 22.54%.

ANALYSES OF FEEDING STUFFS.

No.	Name of Manufacturer or Agent.	Name of Food Stuff.	Place of Sampling.	Protein.		Fat or Ether Extract.	
				Found.	Guaranteed.	Found.	Guaranteed.
13011	The Monticello Distilling Co., Baltimore, Md.	Dried Distillers Grains....	Bel Air.....	16.05	.....	10.18	.....
12956	Melvale Distilling Co., Melvale, Md.	Dried Distillers Grains....	Melvale	13.50	.....	10.25	.....
12972	Washburn & Crosby, Indianapolis, Ind.	Coarse Bran.....	Perryman	14.13	14.50	5.09	3.50
13005	Pillsbury Mills, Minneapolis, Minn.	Pillsbury Bran.....	Hagerstown.....	13.78	.....	5.28	.....
13006	Purina Mills, St. Louis, Mo.....	Purina Mash to make hens lay.	Hagerstown.....	17.64	.....	3.95	.....
13002	The H.-O. Co., Buffalo, N. Y...	H.-O. Poultry Feed.....	Hyattsville.....	17.60	17.00	4.70	5.50
12980	Cyphers Incubator Co., Buffalo, N. Y.	Laying Food.....	Baltimore	17.25	16.31	4.19	3.10
12999	Geo. L. Harding, Binghamton, N. Y.	Egg Builder Rations.....	Hagerstown.....	15.53	12.00	6.78	5.00
12994	The Champion Manufacturing Co., Philadelphia, Pa.	Chickseat.....	Laurel.....	13.78	.....	3.75	.....
12947	" " "	Chickseat.....	Beltsville.....	13.38	.....	4.26	.....
12989	Purina Mills, St. Louis, Mo.....	Purina Pidgeon Feed.....	Baltimore	12.72	.....	3.23	.....
12978	Cyphers Incubator Co., Buffalo, N. Y.	Chick Food.....	Baltimore	12.64	10.54	4.74	3.27
12957	Purina Mills, St. Louis, Mo....	Purina Chick Feed.....	Baltimore	10.97	10.20	3.01	3.60
12988	" " "	Purina Fattening Feed for Poultry.	Baltimore	11.96	.....	5.70	.....

12979	Cyphers Incubator Co., Buffalo, N. Y.	Forcing Food	Baltimore	11.93	12.77	4.31	3.40
12985	The H.-O. Co., Buffalo, N. Y.	H.-O. Scratching Feed for Poultry.	Baltimore	11.67	.....	4.18	.....
12958	Purina Mills, St. Louis, Mo.	Purina Scratch Feed	Baltimore	10.62	.....	2.81	.....
12996	Albert Dickinson Co., Chicago, Ill.	Scratching Food	Hagerstown	10.62	.....	2.90	.....
13009	Agent Hyattsville Grain & Coal Co., Hyattsville, Md.	Ground Oats	Hyattsville	14.78	.....	1.98	.....
12955	The H.-O. Co., Buffalo, N. Y.	H.-O. Horse Feed	Owings Mills	13.43	12 00	5.56	4.50
13003	The Hunter Bros. Milling Co., St. Louis, Mo.	Hominy Feed	College Park	10.27	11.00	9.44	7.70
12990	Richard C. Wells, Baltimore, Md.	Store Feed	Baltimore	11.85	.....	5.40	.....
12977	Cover Supply Co., Baltimore, Md.	C. S. C. Feed	Baltimore	9.92	.....	4.68	.....
12964	American Cereal Co., Chicago, Ill.	Schumachers Stock Feed.	Frederick	9.83	12.00	4.92	5.00
12975	W. G. Bishop & Co., Baltimore, Md.	King Corn & Oat Feed	Baltimore	9.60	8.00	4.30	4.00
12991	American Cereal Co., Chicago, Ill.	Victor Corn & Oat Feed	Hagerstown	8.78	8.00	4.45	4.00
12954	Great Western Cereal Co., Chicago, Ill.	Boss Corn and Oat Feed	Bel Air	8.60	9.00	4.99	4.00
12960	Bay City Mich. Sugar Co., Bay City, Mich.	Dried Sugar Beet Pulp for Stock Feed.	Silver Spring	7.74	.....	1.00	.....
12959	" " "	Imperial Stock Food from Sugar Beets.	Silver Spring	7.63	.....	1.39	.....
12965	American Cereal Co., Chicago, Ill.	Vim Oat Feed	Westminster	7.11	7.50	3.43	2 75
12953	Great Western Cereal Co., Chicago, Ill.	Royal Oat Feed	Perryman	6.76	7.60	2.69	2.80
12946	.....	Corn Bran	Woodsboro	6.05	.....	3.17	.....

The Maryland Agricultural College,

COLLEGE PARK, MD.

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R. W. SILVESTER, President,

COLLEGE PARK, MD.